

Structure of a DEVIL Program

Every DEVIL program must:

- Start with `#DEVI`
- End with `#`

Example:

```
#DEVI  
  // your code here  
#
```

Variable Declarations

DEVIL supports four basic data types:

- integer
- boolean
- float
- string

Syntax:

```
integer x = 5  
float pi = 3.14  
boolean isRunning = true  
string message = "Hello"
```

You can also declare variables without assigning values:

```
integer count  
boolean flag
```

Expressions

DEVIL supports basic arithmetic operations:

- + (addition)
- (subtraction)
- * (multiplication)
- / (division)

Example:

```
integer result = x + 10
```

```
float area = pi * r * r
```

Boolean expressions use:

`==` (equality)

`<` (less than)

`>` (greater than)

`<=` (less than or equal to)

`>=` (greater than or equal to)

Example:

```
boolean isSmall = x < 10
```

Print Statements

Printing in DEVIL uses a special syntax:

Print a string:

```
print#"Hello World" #
```

Print a variable or expression:

```
print# result #
```

Control Structures

If-Else Statement

Syntax:

```
if (condition) {  
    // then block  
} else {  
    // else block  
}  
endif
```

Example:

```
if (x < 10) {  
    print#"Small number"#  
} else {  
    print#"Large number"#  
}  
endif
```

While Loop

Syntax:

```
while (condition) {  
    // loop block  
}  
endwhile
```

Example:

```
while (x < 5) {  
    print# x #  
    x = x + 1  
}  
endwhile
```

For Loop

Syntax:

```
for (initialization # condition # update) {  
    // loop block  
}  
endfor
```

Example:

```
for (integer i = 0 # i < 5 # i = i + 1) {  
    print# i #  
}  
endfor
```

Ternary Operation

DEVIL supports ternary (conditional) expressions:

Syntax:

variable = (condition) ? { valueIfTrue } : { valueIfFalse }

Example:

integer max = (a > b) ? { a } : { b }

Full Example Program

#DEVI

integer x = 3

integer y = 7

```
if (x < y) {  
    print#"x is smaller"#  
} else {  
    print#"y is smaller"#  
}  
endif
```

```
for (integer i = 0 # i < 5 # i = i + 1) {  
    print# i #  
}  
endfor
```

```
while (x < 5) {  
    print# x #  
    x = x + 1  
}  
endwhile
```

```
integer max = (x > y) ? { x } : { y }  
print#"Max is:"#  
print# max #  
#
```

Enjoy coding in DEVIL!